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MAR 13 1964

FOREIGN AGRICULTURE ECONOMICS

USSR
Farm Production
in 1963 1/

ERS-Foreign 70 Regional Analysis Division January 1964

Agricultural output in the Soviet Union during 1963 fell sharply below the level of 1962 and was lower than in 1958, the base year of the present Seven Year Plan. U.S. Department of Agriculture index numbers of Soviet net agricultural output ($1958/58 = 100$) for the crop years 1960/62, 1961/62, 1962/63, and 1963/64 are 97, 100, 100, and 96. 2/

Extensive slaughtering due to inadequate livestock feed supplies and sharply increased delivery prices of livestock resulted in large increases in meat production. This and a record cotton harvest made the decline in total 1963 output less severe. Thus, 5 years after commencement of the present Seven Year Plan (1959-65) -- which envisioned increases of 8 percent per year in gross total agricultural output -- not only has this goal not been achieved but net agricultural production stands at a lower level than when the present plan was initiated. In per capita terms agricultural output is considerably below that of a half decade ago because of the continuing growth of population. In 1963 the Soviet Union turned from exports of 5-7.8 million metric tons of wheat and other grains to heavy imports of wheat.

A dry fall, a severe winter -- with successive freezes and thaws -- followed by one of the worst droughts of the century, were the immediate causes for 1963's shortfalls in production and supplies. The impact of these climatic factors was aggravated by the preceding 4 years of mediocre crops

1/ The material in this report will be expanded in the forthcoming 1964 East European Agricultural Situation, published by Economic Research Service.

2/ The USDA index is on a crop year basis as distinguished from calendar year basis of the Soviet index and is based on Soviet production figures adjusted for assumed overestimation of certain crops. The index excludes seed, animal feed, and waste and covers 28 commodities which constitute the major crop and animal products. The official Soviet index numbers of gross agricultural output for the years 1959, 1960, and 1961, and 1962 ($1958 = 100$) were 100, 103, 105, and 106. The Soviet index has not shown a decline in gross production since 1951.

and by the perennial shortcomings of Soviet agriculture -- rigid state controls, shortages of capital and equipment, faulty production practices, and insufficient incentives to producers.

Although unfavorable weather affected most crops in the Soviet Union, its effect differed greatly among crops and regions. Grains -- especially wheat -- were the hardest hit of all crops. The wheat crop apparently was the smallest since the New Lands program began in 1954, and is estimated to be roughly 12 million metric tons or 23 percent below the 1955-59 average (table 2). Rye, a fall sown crop which was not as seriously affected as wheat, was down somewhat from the low 1962 level despite an increase in the area. Barley was also down slightly despite larger acreage. Oats production was down more than 60 percent from the 1955-59 average, due not only to weather but also to substantial acreage reductions resulting from the Government's policy of restructuring the crop pattern. The output of corn for grain is estimated to be about the same as in 1962. Corn acreage was likely reduced in 1963 about in line with the reduction in 1962 when 2 million hectares of the original 9 million planted were not harvested as dry grain.

On the basis of a statement published in Pravda, December 17, 1963, the total USSR grain crop in 1963 was calculated at about 93 million metric tons. (The figure includes wheat, rye, barley, oats, corn harvested for grain and in the milky wax stage, buckwheat, millet, rice, and pulses.) This is a drop of 55 million metric tons from the official Soviet figure of 148 million tons of grain claimed for 1962, which is regarded as greatly overestimated by the U.S. Department of Agriculture. The figure of 93 million tons for 1963 is close to the estimates made by the U.S. Department of Agriculture for the 1963 grain crop.

The adverse impact of weather on the 1963 crop was enhanced by some major changes in the past decade in the geographical pattern of sown area.

The great expansion of the wheat area is evident from figures in table 1. However, the pattern differs between winter and spring wheat. The area in winter wheat remained about the same during the decade while spring wheat expanded rapidly. This is the result of the New Lands program to increase production of wheat, which could be more easily procured (purchased) by the State. The so-called New Lands area in the semiarid spring wheat belt east of the Volga and the Urals is sparsely populated and, as a consequence, much of the wheat produced there is sold to the State. Yields per acre are low in these regions and fluctuate widely because of recurrent devastating drought, wind erosion, and short growing and harvesting seasons. Thus, the area in wheat rose sharply during the decade, but production became more hazardous because of concentration in the unpredictable New Lands area.

The New Lands program worked well in 1956 and 1958, when bumper crops were harvested. Since that time, however, weather conditions have been less satisfactory or poor and in 1963 the result was a crop failure of major proportions.

Table 1.--Sown area of selected crops in the Soviet Union, 1953 and 1958-63 1/

Crop	1953	1958	1959	1960	1961	1962	1963 2/
Wheat:							
Million hectares							
Winter.....	17.8	18.2	17.4	12.1	17.3	18.1) 67.0
Spring.....	30.5	48.4	45.6	48.3	45.7	49.3) 3/
Rye.....	20.2	17.9	17.1	16.2	16.7	16.9	3/
Corn for dry grain.....	3.5	4.4	3.5	5.1	7.2	7.0	9.1
Corn of all kinds.....	3.5	19.7	22.4	28.2	25.7	37.1	33.9
Barley.....	9.6	8.6	8.3	11.0	11.7	16.2	3/
Oats.....	15.3	14.8	14.3	12.8	11.5	6.9	6.0
Pulses.....	2.4	2.1	2.5	3.3	4.3	7.2	12.8
Annual and perennial grasses.....	24.7	37.0	41.7	43.9	38.7	27.3	24.7
Fallow.....	29.6	24.0	23.6	17.4	16.1	7.4	3/
:							

1/ Soviet official data. In addition to the expansion of the spring wheat area into the New Lands during 1954-57 the other major changes in sown area illustrated in this table were occasioned by: (a) the corn expansion program Khrushchev initiated in 1954, which tapered off only in 1963; (b) the reduction of annual and perennial grasses and fallow land and the replacement of these crops by livestock feed crops, mostly pulses; and (c) the sharp decline in oats and increase in barley.

2/ Soviet data for sown area as of July 1963, which does not in all cases agree with later USDA estimates in table 2.

3/ Not available.

"The new lands region of Kazakhstan this year gave the very lowest harvest of grain in all the ten years since the region was opened up. . . . Certain farms did not even harvest their seed. Large areas of sown area simply had to be written off." 3/

This loss in the New Lands was accentuated by heavy winterkill of wheat in European USSR and by summer drought which damaged spring grains throughout practically all of the Soviet Union.

The impact of this crop failure had a disproportionate effect on the Soviet economy. Wheat production fell by about one-fourth from 1962, but since the Government procures more than half of its wheat from the New Lands, procurements were hit especially hard. It is from these procurements that grain is obtained for consumers in urban centers and grain-deficit rural areas, as well as for export, stockpiling, and industrial uses.

3/ A. Baraev, "Problemy tseliny," Partiynaya zhizn' Kazakhstana, No. 9 1963, p. 9.

Other crops were also adversely affected by the drought, but to a lesser extent than grains. The potato crop is estimated to have been about 13 percent lower than the 1955-59 average, though higher than in 1962, which was also a year of a serious shortfall in Soviet potato production (see table 2). Sugar beets for sugar production are estimated to be down somewhat from the 1962 low crop despite an increase in area. Although the crop was about 6 million metric tons above the 1955-59 average, there have been declines in sugar beet production since 1960 despite increases in area.

The sunflower seed crop -- the major oilseed crop -- is reported to be down somewhat from 1962. The supply of oilseeds in 1963, however, was augmented by the large amount of cottonseed from the 1963 cotton crop.

Cotton production was the bright spot in Soviet agriculture in 1963. It was reported that by the end of November 1963 more than 5 million metric tons of unginned cotton (about 8 million bales of ginned cotton) had been delivered to the Government. If the report is correct, this is by far the largest Soviet cotton crop harvested. Cotton production, instead of increasing as planned, remained fairly stable at about 1.4 million metric tons of cotton lint (about 6.5-7 million bales) over the past few years. The sharp increase in 1963 was due primarily to the availability of irrigation water, although there was a small increase in area. Soviet cotton is grown entirely under irrigation.

The poor harvest further reduced the livestock feed supply. This drove down milk yields and production; but meat production rose because of increased slaughter. Sharply increased state purchase prices for livestock (dating from mid-1962) also stimulated deliveries. The upward trend in livestock numbers, which was of major proportions in the past decade, appears to have slowed down.

Large increases in livestock numbers were reported between January 1962 and January 1963. But Soviet officials have stated that, although cattle numbers by mid-1963 were 3 million above mid-1962, the number of swine and poultry was "reduced somewhat." Sheep and goats were reported to have increased by 2.7 million head. Statements by Khrushchev and other Soviet officials indicate total meat production (including poultry) will be up from 8 to 10 percent in 1963 compared with 1962, when it increased 9 percent over the preceding year. However, in view of the very great increase in livestock herds -- especially pigs -- during the past 5 or 6 years, the sharp rise in prices paid by the State for meat, the difficult feed supply situation, and high meat production goals, it is surprising that the reported meat production has not increased to a greater extent.

It is apparent from this review of Soviet agricultural production in 1963 that the primary impact of agricultural difficulties was on the most important food item in the Soviet diet -- bread -- and the most important Soviet agricultural export -- wheat. This has resulted in the replacement of traditional exports of wheat by heavy imports and a tightening of the bread supply as well as the use of lower quality flour.

Given the very large crop acreage in the Soviet Union, even a modest improvement in weather during the 1964 growing season would improve the agricultural picture. For example, an increase of only 1 bushel per acre in the yield of bread grains on an area of 200 million acres would result in an additional 200 million bushels. If some increase in the application of mineral fertilizer in areas of higher rainfall should materialize, this will also help. It is premature at this juncture to discuss the outlook for the 1964 crop. However, the repetition of a dry fall in 1963, which retarded the development of winter (fall sown) grain in some important regions, increases the danger of extensive winterkilling, which may require resowing in the spring.

Table 2.—Soviet Union: Area and production of principal crops, output of animal products, and number of livestock, average 1955-59, annual 1960-63¹

Item	1955-59 average			1960			1961			1962			1963 ²		
	Area	Production	Area												
	1,000 metric tons														
Field crops:															
Wheat.....	64,234	52,015	60,393	46,274	63,000	52,262	67,400	51,440	66,000	40,000					
Rye.....	18,107	15,203	16,200	13,203	16,700	15,240	16,900	13,716	18,200	12,000					
Barley.....	10,040	9,600	11,000	11,430	11,700	13,300	16,200	15,674	18,500	14,800					
Oats.....	14,613	12,015	12,800	10,886	11,500	8,709	6,900	5,600	6,000	3,900					
Corn ³ /.....	4,727	7,536	5,100	7,620	7,200	12,700	7,000	9,800	7,000	9,800					
Potatoes.....	9,426	77,247	9,144	75,932	8,378	75,841	8,700	61,870	8,500	67,500					
Sugar beets ⁴ /															
(factory) ⁴ /	2,226	40,309	3,040	57,728	3,120	50,911	3,170	47,400	3,326	46,600					
Sunflower seed ⁵ /	4,001	3,364	4,190	3,674	4,217	4,400	4,390	4,400	4,600	4,000					
Cotton (ginned) ⁶ /	2,131	1,458	2,190	1,454	2,330	1,540	2,390	1,458	2,430	1,760					
Livestock:															
Products:															
Meat ⁷ /	5,205	---	5,995	---	6,040	---	6,685	---	7,200						
Poultry ⁸ /	573	---	800	---	800	---	900	---	860						
Milk.....	46,180	294	52,400	353	53,200	362	54,600	366	52,000	376					
Wool.....	---	---	---	---	---	---	---	---	---	---					
Eggs ⁹ /															
Billion units															
21.8															
Million head															
Number: ¹⁰ /															
Cattle.....	62.9	---	74.2	---	75.8	---	82.1	---	86.9						
Hogs.....	39.9	---	53.4	---	58.7	---	66.7	---	69.9						
Sheep.....	112.1	---	136.1	---	133.0	---	137.5	---	139.6						
Horses.....	12.6	---	11.0	---	9.9	---	9.4	---	9.0						

¹/ USDA estimates of production unless otherwise specified; Soviet estimates for area and livestock numbers.

²/ USDA preliminary estimates.

³/ Corn for grain.

⁴/ Soviet production estimates.

⁵/ Beef, veal, pork, mutton, lamb and goat, carcass weight.

⁶/ Dressed weight.

⁷/ January 1.

Conversion equivalents: 1 hectare = 2.471 acres; 1 metric ton = 2,204.6 pounds. For grain, 1 metric ton = 36.7 bushels of wheat, 39.4 bushels of rye or corn, 45.9 bushels of barley, or 68.9 bushels of oats. 1 metric ton of ginned cotton = 4.6 bales.

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